

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.: 10/608,907 Confirmation No.: 2201

Applicant: Sommadossi *et al.*

Filed: June 27, 2003

TC/AU.: Unassigned

Examiner: Unassigned

Docket No.: 06171.105034 IDX 1018

Customer No.: 20786

Title: Modified 2' and 3'-Nucleoside Prodrugs for Treating Flaviviridae Infections

Commissioner for Patents

P. O. Box 1450

Alexandria, VA 22313-1450

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Sir:

The citation of information on the attached Form PTO-1449, "List of Art Cited by Applicant" is made pursuant to 37 C.F.R. §§ 1.56, 1.97, and 1.98. Copies of all references are enclosed. The citation of this information does not constitute an admission of priority or that any cited item is available as a reference, or a waiver of any right the applicant may have under applicable statutes, Rules of Practice in patent cases, or otherwise.

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Respectfully submitted,

Sherry M. Knowles

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Application Number **10/608,907**

Filing Date **June 27, 2003**

First Named Inventor **Sommadossi et al.**

Group Art Unit **Unassigned**

Examiner Name **Unassigned**

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		Number	Kind Code (if known)				
	AA	3,798,209		Wilkowski, et al.	03-19-1974		
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		Office ³	Number	Kind Code ² (if known)				
	AQ	DE	3,512,781	A1	Soc. Nat. Elf Aquitaine	10-17-1985		
	AR	EP	0,180,276	B1	Stamicarbon B.V.	12-19-1988		
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	AV	WO	90/00555	A1	Vical Inc.	01-25-1990		
	AW	WO	91/16920	A1	Vical Inc.	11-14-1991		

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June 27, 2003

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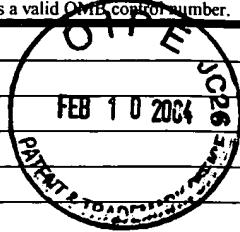
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	BA	WO	91/18914	A1	Vical Inc.	12-12-1991		
	BB	WO	91/19721	A1	Glazier	12-26-1991		
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	BAC	WO	03/024461	A1	Schering Corporation	03-27-2003		

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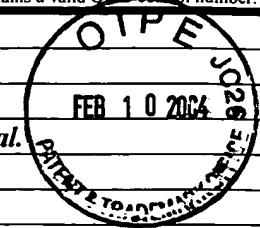
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Unassigned

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		Office ³	Number	Kind Code ² (if known)				
	CA	WO	04/003138	A2	Merck & Co., Isis Pharmaceutical	01-08-2004		
	CB	WO	04/007512	A2	Merck & Co., Isis Pharmaceutical	01-22-2004		
	CC	WO	04/009020	A2	Merck & Co., Isis Pharmaceutical	01-29-2004		

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

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	CE	BATTAGLIA, A.M. et al., "Combination Therapy with Interferon and Ribavirin in the Treatment of Chronic Hepatitis C Infection", <i>Ann. Pharmacother.</i> , 34:487-494 (2000).	
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				Application Number	10/608,907
				Filing Date	June 27, 2003
				First Named Inventor	Sommadossi et al.
				Group Art Unit	Unassigned
				Examiner Name	Unassigned
4	of	7		Attorney Docket Number	06171.105034 IDX 1018

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OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	DA	DORN SIFE, R.E., et al., "In vitro potency of inhibition by antiviral drugs of hematopoietic progenitor colony formation correlates with exposure at hemotoxic levels in Human Immunodeficiency Virus-positive humans," <i>Antimicrob. Agents Chemother.</i> , 40(2):514-519 (1996).	
	DB	DYMOCK, B.W., et al., "Review: Novel approaches to the treatment of hepatitis C virus infection," <i>Antiviral Chemistry & Chemotherapy</i> , 11(2):79-95 (2000).	
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	DD	FARKAS, J., et al., "Nucleic acid components and their analogues. XCIV. Synthesis of 6-amino-9-(1-deoxy-β-D-psicofuranosyl)purine", <i>Collect. Czech. Chem. Commun.</i> 32:2663-2667 (1967).	
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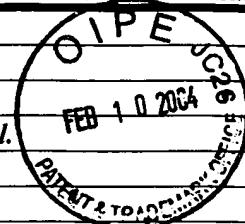
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	EA	HOSTETLER, K.Y., <i>et al.</i> , "Greatly enhanced inhibition of Human Immunodeficiency Virus Type I replication in CEM and HT4-6C cells by 3'-deoxythymidine diphosphate dimyristoylglycerol, a lipid prodrug of 3'-deoxythymidine," <i>Antimicrob. Agents Chemother.</i> , 36:2025-2029 (September 1992).	
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	EK	LEWIS W., <i>et al.</i> , "Zidovudine induces molecular, biochemical, and ultrastructural changes in rat skeletal muscle mitochondria," <i>J. Clin. Invest.</i> , 89(4):1354-1360 (1992).	
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	EN	LOHMANN V., <i>et al.</i> , "Biochemical and kinetic analyses of NS5B RNA-dependent RNA polymerase of the Hepatitis C virus," <i>Virology</i> , 249, 108-118 (1998).	
	EO	LUH, T.-Y., <i>et al.</i> , "A convenient method for the selective esterification of amino-alcohols," <i>Synthetic Communications</i> , 8(5):327-333 (1978).	

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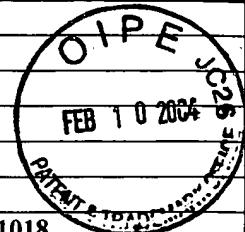
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Application Number	10/608,907
Filing Date	June 27, 2003
First Named Inventor	Sommadossi et al.
Group Art Unit	Unassigned
Examiner Name	Unassigned

Attorney Docket Number **06171.105034 IDX 1018**

3405734 /

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶
	FA	McCORMICK, J., et al., "Structure and total synthesis of HF-7, a neuroactive glyconucleoside disulfate from the funnel-web spide <i>Hololena curta</i> ," <i>J. Am. Chem. Soc.</i> , 121(24), 5661-5664 (1999).	
	FB	MCKENZIE, R., et al., "Hepatic failure and lactic acidosis due to fialuridine (FIAU), an investigational nucleoside analogue for chronic hepatitis B," <i>N. Engl. J. Med.</i> , 333(17):1099-1105 (1995).	
	FC	MEDINA, D. J., et al., "Comparison of mitochondrial morphology, mitochondrial DNA content, and cell viability in cultured cells treated with three anti-Human Immunodeficiency Virus dideoxynucleosides," <i>Antimicrob. Agents Chemother.</i> , 38(8):1824-8 (1994).	
	FD	MEIER, C., et al., "Cyclic saligenyl phosphotriesters of 2',3'-dideoxy-2',3'-didehydrothymidine (d4T) – A new pro-nucleic approach." <i>Bioorganic & Med. Chem. Letters</i> 7(2):99-104 (1997).	
	FE	MEYER, R.B., Jr., et al., "2'-O-Acyl-6-thioinosine cyclic 3',5'-phosphates as prodrugs of thioinosinic acid," <i>J. Med. Chem.</i> 22: 811-815 (1979).	
	FF	NEIDLEIN, R., et al., "Mild preparation of 1-benzyl oxyiminoalkylphosphonic dichlorides: Application to the synthesis of cyclic phosphonic diesters and cyclic monoester amides," <i>Heterocycles</i> 35:1185-1203 (1993).	
	FG	NUTT, R.F., et al., "Branched-chain sugar nucleosides. III. 3'-C-methyladenine", <i>J.Org. Chem.</i> , 33:1789-1795 (1968).	
	FH	OLSEN, et al. (Oral Session V, Hepatitis C Virus, Flaviviridae; 16 th International Conference on Antiviral Research (April 27, 2003, Savannah, Ga.) p A76).	
	FI	PAN-ZHOU, X-R, et al., "Differential effects of antiretroviral nucleoside analogs on mitochondrial function in HepG2 cells," <i>Antimicrob. Agents Chemother.</i> 44:496-503 (2000).	
	FJ	PIANTADOSI, C., et al., "Synthesis and evaluation of novel ether lipid nucleoside conjugates for anti-HIV-1 activity," <i>J. Med. Chem.</i> 34:1408-1414 (1991).	
	FK	RICHMAN, D.D., et al., "The toxicity of azidothymidine (AZT) in the treatment of patients with AIDS and AIDS-Related Complex," <i>N. Engl. J. Med.</i> , 317(4):192-197 (1987).	
	FL	SOMMADOSSI J-P, et al., "Comparison of cytotoxicity of the (-)- and (+)- enantiomer of 2',3'-dideoxy-3'-thiacytidine in normal human bone marrow progenitor cells," <i>Biochemical Pharmacology</i> 44(10):1921-1925 (1992).	
	FM	SOMMADOSSI J.-P., et al., "Toxicity of 3'-azido-3'-deoxythymidine and 9-(1,3-dihydroxy-2-propoxymethyl)guanine for normal human hematopoietic progenitor cells in vitro," <i>Antimicrobial Agents and Chemotherapy</i> , 31:452-454 (1987).	
	FN	STARRETT, J.E.Jr., et al., "Synthesis, oral bioavailability determination, and <i>in vitro</i> evaluation of prodrugs of the antiviral agents 9-(2-(phosphonomethoxy)ethyl]adenine (PMEA)," <i>J. Med. Chem.</i> 37: 1857-1864 (1994).	

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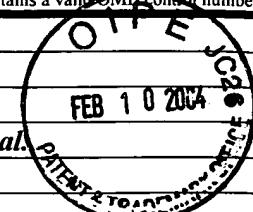
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	GA	WEINBERG, R.S., et al., "Effect of antiviral drugs and hematopoietic growth factors on <i>in vitro</i> erythropoiesis," <i>Mt. Sinai J. Med.</i> 1998;65(1):5-13.	
	GB	YARCHOAN, R., et al. "Long-term toxicity / activity profile of 2',3'-dideoxyinosine in AIDS or AIDS-related complex," <i>The Lancet</i> , 336(8714):526-529 (1990).	
	GC	YOSHIDA Y, et al., "Reversal of azidothymidine-induced bone marrow suppression by 2',3'-dideoxythymidine as studied by hemopoietic clonal culture," <i>AIDS Res. Hum. Retroviruses</i> , 6(7):929-932 (1990).	
	GD	ZON, G., "Cyclophosphamide Analogues," Chapter 4 in <i>Progress in Medicinal Chemistry</i> , Vol. 19, G.P. Ellis and G.B. West, Eds., pp. 205-246 (1982).	

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